

Concrete Garages



Concrete for Permanence



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Concrete Garages

The amount of money invested in the average motor vehicle justifies a garage which will satisfy three essential requirements: *protection against the weather, security against fire and theft and reasonable convenience* in its use and maintenance. A garage which provides all of these features is most economical in the long run. Concrete garages are the preferred type because they provide all of these important requirements at minimum first cost and maintenance expense, at the same time offering attractive appearance in harmony with home surroundings.

The Private Garage

Most automobile owners prefer to house their cars in their own garages. With storage facilities on the home premises, the owner has his car where it is not only readily accessible, but also where advantage can be taken of spare time to work on the car. A private garage also provides a place to keep lubricants and other automobile supplies, making it possible for the owner to secure the benefits of quantity buying. There is less likelihood of tampering or theft in a substantial garage at home with the owner's family nearby.

In rural districts car owners have no opportunity to rent space suitable for the storage of their machines, so a home garage is necessary. Storage in a frame barn, implement shed or other building is unsatisfactory since it greatly increases the fire risk to the building and its contents as well as to the automobile. Car storage in any building used as a stable is likely to be objectionable because fumes from stable refuse soon dull the gloss and luster of the varnish and tarnish the metal parts. Dust and moisture which are always present around a barn are also injurious to varnished surfaces. The farm garage is often made large enough to accommodate the automobile, truck and tractor.



Beauty is combined with permanence in the well-built concrete garage.



The concrete garage can be designed to harmonize with its surroundings.

Beauty of Concrete Garages

A garage properly designed and constructed will enhance rather than detract from the beauty of the surroundings. Some predominant feature in the house design usually can be introduced in the lines of the garage to give unity of appearance. Sharp contrast in design between garage

and dwelling is harsh and should be avoided. In whatever location the garage is placed, it usually appears in a general view of the house and should, therefore, harmonize with it.

Concrete construction is readily adapted to any architectural style. Thousands of concrete garages have demonstrated their complete adaptability to even the most exacting requirements. An almost endless variety of colors and surface finishes is possible with portland cement stucco, the usual method of surfacing garages built of concrete masonry.

Portland cement stucco can be given smooth, stippled, spatter-dash or any of the newer textural finishes that are proving so popular. It may be tinted buff, brown, gray or any other shade required.

Some concrete products manufacturers are prepared to furnish attractive, granite faced block. In the manufacture of these block fine surface mixtures of crushed granite and marble are used and the faces scrubbed with acid solutions so that the beauties of this texture are fully developed. Such block compare favorably in artistic appearance with the finest cut stone.



A garage with walls of portland cement stucco and roof of concrete tile will add attractiveness to the home grounds.

Security in Concrete Garages

In addition to the fire hazards common to other buildings, the garage has a peculiar hazard of its own, due to the presence of gasoline and oil. The fire-resisting properties of concrete are well known since concrete walls have repeatedly and successfully demonstrated their ability to withstand severe fires. The owner has the satisfaction of knowing that his car will have maximum fire protection when housed in a concrete garage. While there is a possibility that fire may originate in a non-combustible concrete garage, the flames will be confined and may be more easily combatted. A concrete garage protects adjacent structures from fires starting within, and protects its contents from fires starting elsewhere.

In many cities, building regulations require that structures of inflammable construction be built some distance away from the lot line, but allow fireproof buildings to be built to the lot line.



Because it is fire-safe, concrete is the logical material for garage attached to the home.



Your car receives maximum protection if housed in a concrete garage.

Thus on narrow city lots fireproof concrete garages have a decided advantage in saving space. The small strip of land between the lot line and an inflammable garage is usually worse than useless, often becoming the depository for combustible trash. With fireproof concrete construction it is possible, where desired, to erect two garages side by side with a fireproof party wall on the lot line, resulting in a saving of space and material for both owners.



The concrete garage is a good investment because of the security afforded and the absence of maintenance expense.

Economy of Concrete Garages

In addition to the economies resulting from fireproofness there are other features about a concrete garage which result in even more tangible savings for the owner. Maintenance costs are practically eliminated.

There will be no bills for painting except for an occasional renewal of paint on window frames, doors and trim. Even these may be built of concrete or metal and the upkeep thus reduced to the absolute minimum. With a concrete garage the cost per year is negligible, if not entirely eliminated. Concrete is so permanent that depreciation in value is postponed many years. The resale value of the home is always enhanced if there is a permanently constructed garage on the place. The fact that modern garages are everywhere being built of concrete is the most convincing proof that architects, builders and owners recognize the economy as well as the other advantages of this type of construction.

Dependability

The extensive and increasing use of concrete for all classes of structures indicates that architects, builders and owners recognize the value of permanent, maintenance-free construction. Concrete masonry garages have walls of stucco-covered or granite-surfaced concrete block or concrete building tile. These materials are obtainable almost everywhere from local concrete products or building material dealers. Building contractors everywhere are becoming acquainted with the concrete masonry system of construction, recognizing it as the most advanced method for garages as well as all other buildings of moderate height.



Dependable housing for your automobile is assured in the storm-proof, fire-safe, permanent concrete garage.



Greater fire safety is afforded when the semi-detached garage is of concrete construction.

Attached and Semi- Detached Garages

Small building lots and the desirability of locating the garage in the most readily accessible position have resulted in the development of the attached and semi-detached types. A number of savings in construction are

made, due to the use of common walls and roof. For built-in garages, concrete is the preferred material because it offers greater fire-safety. The attached garage is usually an integral part of the house and is heated by the house heating system.

If the garage is entered directly from the house, the opening should be equipped with an automatic closing fire-door. The building codes of some cities prohibit connecting doors between the house and garage; in such case a canopy may be built between kitchen entry and the garage so that it can be reached comfortably in stormy weather. Another arrangement separates the garage from the house by a narrow, covered passageway.

In case the lot slopes sharply toward the street, the garage is often conveniently built in the basement; then the sleeping porch or sun parlor is frequently placed over the room where the car is housed. In using this arrangement, it is necessary that the garage ceiling be fire-proof. A reinforced concrete slab provides the best means of insuring this and the additional cost over combustible types is very small. Where wood joist construction is employed it is necessary to use metal lath and cement plaster for the



On sloping ground, construction costs are decreased when the garage is incorporated into the plan of the house.

ceiling. Reliable tests have shown that this construction will resist the passage of flames for at least one hour.

Two-Car Garage Pays Its Own Way



A two-car concrete garage is a source of profit to its owner.

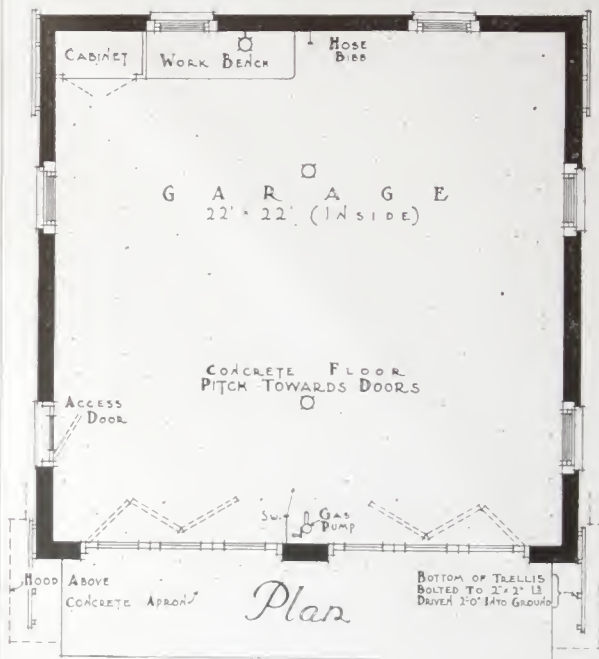
Garages constructed to provide storage space for two or more cars have become popular with thrifty owners in recent years. The cost per car of building a garage for two or more cars is relatively less than for a one-car garage, and the extra space over that required by the owner can usually be rented at a substantial profit. The rental received is usually more than sufficient to cover interest charges, taxes and the other expenses on the entire structure, giving the owner storage space for his car at

practically no cost and often giving him considerable cash return as well. For the owner of a single car who prefers not to rent out space, the double garage is still a good investment, providing work room, adding to the salability of the place and providing accommodation for visiting cars—a mark of hospitality that is appreciated.



The rental received from one-half of the two-car garage pays all expenses and nets a profit.

A Good Plan for a Two-Car Concrete



AN ATTRACTIVE garage like this adds to the beauty of its surroundings. The dimensions are ample to provide plenty of working space around the cars. Built of concrete block or building tile and covered with portland cement stucco to conform with the house to which it adjoins, it makes an attractive, fireproof and permanent shelter. Space can be rented out if desired.



FRONT



SIDE

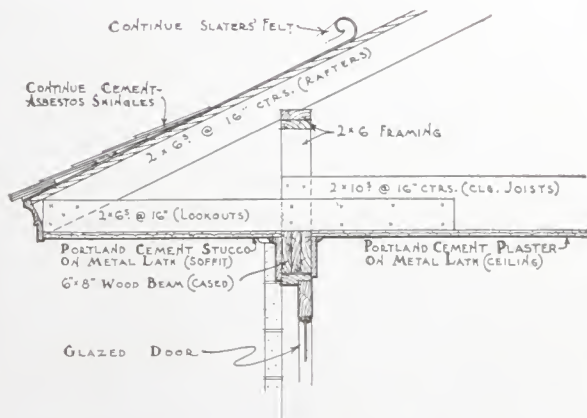
Be sure to build
See page 11 for

Concrete Garage — Attractive and Roomy

ATTRACTIVE like this beauty of buildings. The designs are provide plenty of parking space for the cars. The concrete block and tile are with portland cement to make the house it adjoins, an attractive and permanent space can be made if desired.



Be sure to build the garage large enough.
See page 11 for average car lengths.



Community or Multi-Car Garages

The community or the multi-car garage is rapidly gaining popularity in the more densely populated residential sections of our larger cities. It combines the advantages of the individual private garage with those of the public garage. In principle, the community garage resembles a number of single-car garages placed side by side, with heating arrangements and other facilities in common. It provides private stalls where the automobile can be cleaned, lubricated and repaired by the owner, if desired. In each stall sufficient space is generally provided for the storage of supplies and each has its own doors, bench, water pipes and lockers. The community garage often represents the most economical use of space for automobile storage purposes and in many localities offers an excellent opportunity for investment.

Fire hazards are reduced to a minimum when community garages are of concrete construction. To obtain maximum fire protection, individual stalls are often separated by masonry partition walls. A slightly more economical type of construction is to group two to four stalls together in a

compartment, the individual stalls being separated by concrete walls three or four feet high, above which are partitions of heavy galvanized wire extending to the roof. By paying some attention to the planting of vines and shrubs, the community garage can be made sufficiently attractive to be unobjectionable even in the most exclusive residential sections.



Low cost and minimum maintenance expense of a concrete community garage assure its owner of a profitable investment.



Several automobiles may be housed safely in a multi-car garage when concrete is the construction material.



You may buy a larger car—allow space for it when building your garage.

Garage Sizes

Automobile owners frequently find when they dispose of their first cars and secure new and larger ones that the garage space available is inadequate; in such case either an addition must be built to the old garage or an entirely new building erected at considerable expense. For a single-car garage a minimum

inside width of 12 feet is desirable and for two-car garage 20 or 22 feet. For garages of the multi-car or community types, a width of not less than 10 feet should be allowed for each car. If permanent partitions are erected between stalls, a width of 12 feet is recommended.

A length of less than 20 feet is seldom advisable, and for larger cars 22 feet to 24 feet is not too much. These dimensions allow plenty of working space around the car and provide room for a small work bench, closets and shelves for car accessories. The convenience of the extra space is worth many times the slight additional cost of building the garage 2 or 4 feet longer.

The over-all length of various types and makes of automobiles varies greatly, from the Ford, which measures about 12 feet 3 inches with front and rear bumpers, to the Pierce-Arrow 7-passenger touring model which measures 17 feet 4 inches, and the Cadillac 7-passenger touring model with an extreme length of 17 feet 6 inches, bumper-equipped.



Careful car owners gladly pay more rental for the storm and fire-safe concrete garage.

Building the Garage

Foundation and Footing

A substantial footing that will not yield is of prime importance in the construction of a concrete masonry garage. To prevent possible upheaval on account of frost action, the concrete foundation must extend below frost penetration. It should always go down to firm soil, so there will be no opportunity for the building to settle. The proper spread of footing will, of course, vary according to the weight of the building and the bearing power of the soil. Under average conditions, a footing having a spread of 12 inches will be satisfactory for garages of one-story height. When a sun parlor, porch or chauffeur's quarters are located on the second story, the footing should be made correspondingly wider; a width of 18 inches is then generally sufficient.

Floor

A concrete floor is essential and worth many times its cost. It is easy to build and presents a smooth, even surface that can easily be kept clean. It is a good plan to give the floor a slope of about one inch in 8 feet toward the doors through which the car passes. Repair pits are frequently built in the floor, over which the car can be run when necessary to make slight repairs or when cleaning underneath the car. When not in use the pit is covered with a removable platform.

A concrete approach built on an easy incline is also desirable so that the automobile can be run in or out without jolting. It is desirable to extend this approach beyond the doors, at least one foot farther than the drip line of the eaves. If this is not done, the entrance to the garage may be muddy in wet weather. Probably the most satisfactory and economical method of building the approach is to continue the floor

out with a vertical construction joint at the building line. The foundation wall under the door opening is omitted entirely. Under the pavement a deep bed of tamped cinders should be placed with under-drainage that will insure that water will never collect in it. Then frost action will not displace the approach.

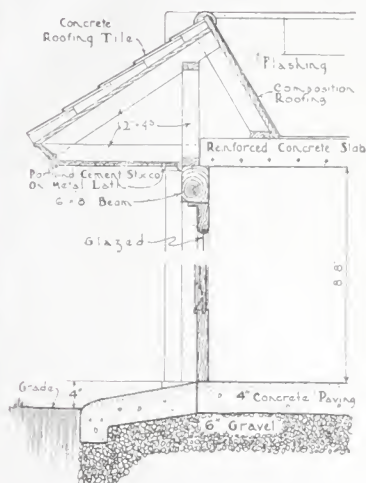


There is pleasure as well as security in housing your car in an attractive, fire-safe concrete garage like this.

Design for One-Car Garage with Concrete Roof



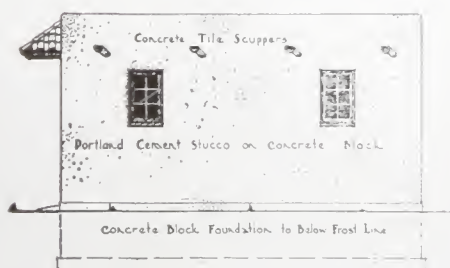
Plan



Section Thru Entrance



Front



Side

Concrete Masonry Adaptable, Attractive and Readily Available

Concrete masonry is an adaptable and attractive building material for the walls of the garage. There is scarcely a community that is not within easy hauling or trucking distance of a plant where concrete block or concrete building tile are produced. These units laid in portland cement mortar



Concrete masonry units are easily and quickly laid.

produce the most durable and fire-resistive kind of wall. Because of the sealed air spaces in concrete masonry walls, structures built of this material are easy to keep warm; the air spaces insulate the interior against sudden changes in outside temperatures and in the same way prevent loss of such heat as may be supplied to the interior. Heating should preferably be done by extending hot water or steam pipes from the residence heating plant, although satisfactory garage heaters are available.

Garage interiors should be well lighted. Windows should be large and well distributed—placed low in the wall to admit light near the floor rather than at too high an elevation. Electric light furnishes the safest and most convenient artificial illumination.

Fire-Resistive Roof Essential

Complete fire protection demands that the roof be of non-burning construction. Reinforced concrete is ideal in this respect. The sketch



Concrete roofing tile cannot blow away or burn.

on page 13 shows one method of building a roof of this type. However, reasonably firesafe construction can be obtained with a frame roof covered with cement asbestos shingles or concrete roofing tile, using cement plaster on metal lath for the ceiling. Over the door of the garage, the roof should project at least two feet for protection in bad weather.



To provide for heavy traffic, the entire driveway area should be paved, as shown on the left. For light usage, narrow, parallel strips of concrete, as illustrated on the right, may satisfy.

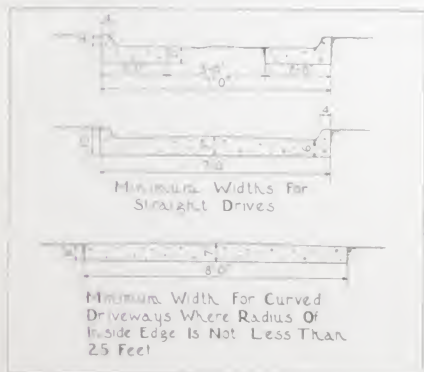
Concrete Driveways

Where approach must be made from the street, the garage is not complete until a "year 'round" concrete drive has been provided. Several types of drives have been developed. Where subjected to hard service, or use by several cars, pavements covering the entire drive area give the best satisfaction. Narrow, parallel strips of concrete often provide a satisfactory approach where the garage is subject to only occasional use. The disadvantage of strip pavement arises from the possibility of running off occasionally and cutting up the lawn unless the runways are built with curbs on the outer edges to provide a guide for the wheels.

The usual dimensions for drives of both types are shown in drawings on this page. Slab thickness of 6 inches is recommended in order to take care of coal and delivery truck traffic. Concrete mixture consisting of one part portland cement to two parts fine aggregate (sand)

and three parts coarse aggregate (pebbles or crushed rock), is generally preferred. The surface should be finished with a wood float in order to provide non-slippery bearing.

After the concrete has hardened sufficiently so that the surface will not be easily marred, it must be protected from drying by covering with damp earth, sand, straw or some other material, which must be kept moist for a week, sprinkling as often as necessary. The concrete should be allowed to harden for two or three weeks before the drive is put into service.



Sectional view of two types of parallel track driveways and one solid pavement type.

Two Books You Need— FREE



"A Book of Beautiful Homes" contains 48 pages of pictures and plans of houses that have been made beautiful, firesafe and permanent with concrete masonry and portland cement stucco.

"Portland Cement Stucco Surfacing" contains 28 pages of attractive stucco textures with full information about technique of application. The use of color in stucco is also discussed.



Your copies of these booklets are waiting. Write for them today. There is no obligation.

Portland Cement Association

*A National Organization to Improve
and Extend the Uses of Concrete*

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